

Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

In the Matter of Implementation ) CS Docket No. 97-80  
of Section 304 of Telecommunications)  
Act of 1996, Commercial )  
Availability of Navigation )  
Devices )

COMMENTS OF COMMERCIAL ENGINEERING

1. Introduction. Commercial Engineering (CE) is a company engaged in the research, development and eventual marketing of fully addressable navigation devices which will maintain signal security, and which will be compatible with the primary existing addressable cable systems currently in place. These navigation devices would be suitable for use both by existing cable systems as either replacement or alternative equipment, and would also be suitable for direct marketing by retailers to consumers.

These navigation devices as presently designed can be made compatible with the existing major cable systems through the addition of an appropriate security card or module which tailors the device to the particular system in use by a cable company. The navigation device would in turn be activated by the cable company after the consumer notifies the company of its installation and provides the appropriate serial number of the device and/or card which then permits it to become an operational part of the cable company system. These devices are designed to be more secure than the existing cable boxes presently in use.

These navigation devices will also have a substantial number of additional features available to consumers which will make

them more attractive and desirable to consumers as compared to the standard "plain" cable box offered by the local cable company. In the event the security card is removed, the device will function only as a converter. Presently, the device is intended to be manufactured with the appropriate security card already installed. These devices will be equipped with dual tuners and have the capability to be equipped with two such cards where competing systems overlap allowing the consumer the ability to chose between the existing cable systems' programming through the same device thus allowing real head to head competition with the consumer in control.

As will be discussed herein, it is CE's contention, that navigation devices similar to the ones described would meet the concerns previously expressed by Congress and the FCC and that the proposed rules should be written to accommodate and promote the commercial availability of such devices.

2. Right to Attach. CE concurs with the Commission's proposal that there be a right to attach equipment acquired by subscribers to the cable network, provided, of course, that the equipment does not cause any harm to the system. An addressable navigation device which can be configured to be compatible with several different systems, such as the CE device, would certainly address the concerns of the Commission in regard to interchangability among different types of MVPD providers.

3. Affiliation. CE believes that it is essential that navigation equipment be commercially available through unaffiliated outlets. In the case of the proposed CE devices,

this would include commercial retailers of electronic equipment, as well as direct marketing to customers.

4. Entities Covered. CE directs its comments to cable television systems, although it would note that the present DBS systems appear to provide a more appropriate model and a good analogy in terms of competition, consumer availability and the development of new equipment, much of which can be applied to the cable television environment.

5. Equipment Covered. CE limits its comments as to the type of equipment covered by the proposed regulations to include traditional set-top devices including converter boxes and converter decoders. In addition, the primary focus of these comments is tailored toward fully addressable converter decoders. In recognition of the fact that a large number of cable systems presently have a programmable rather than addressable system, however, CE has also designed programmable devices which may be programmed to operate on a similar basis and which could also be made available through commercial retail outlets in those areas where an addressable system is not presently in place. Since programmable or nonaddressable cable households comprise at least 40% of the current cable systems, these proposed rules and regulations should not exclude this aspect of the marketplace.

6. Commercial Availability. CE urges that "commercial availability" of navigation equipment be given the widest possible scope and latitude to insure that consumers have ample options and choices, and are not forced to purchase or lease devices from their cable system. This should include

availability in retail outlets as well as direct marketing to consumers.

Given the type of equipment that CE envisions, and as presently designed, the retailers would not be acting as an "agent" for the service provider. On the other hand, the cable system would not be sacrificing its ultimate control over the equipment, which would either be fully addressable or programmable as the case may be, and could only be activated by the system operator upon installation and notification by the consumer. Under this model as envisioned by CE, the retailer would simply order the types of equipment from the distributor or manufacturer which would be compatible with the system or systems in its particular locale. It is also possible, that retailers may order the equipment without the specific security cards or modules installed, and install the appropriate cards or modules prior to the sale to a specific customer, thus tailoring it specifically to that consumer's cable system.

CE strongly urges that the rules eventually adopted encourage the widest number of manufacturers of such equipment. At present the equipment available on most cable systems is limited to two principal manufacturers with very close ties to the cable service industry. The consumer is not benefited by this current lock down on the marketplace. Moreover, innovations, new products and new developments, are stifled in this sterile and controlled environment. A regulatory scheme which opens the marketplace to a substantial number of manufacturers and developers of this type of equipment will spur

new technological innovations which ultimately benefit both the consumer and the industry as a whole.

7. Portability and Interoperability. Given the type of navigation devices and the general model proposed by CE, consumers would have adequate portability and interoperability. All that would be required is the change out of the particular security card. This, of course, is limited to a certain extent by the division of current cable system as to addressable and nonaddressable systems. Until all systems reach the same level of development this dichotomy may best be addressed by the modular type of concept envisioned by CE. Clearly the ability to tailor a navigation device by the installation of a security card, module or other component, either externally as with DBS or internally as with CE, in a fully addressable environment, would allow complete interoperability and portability by the consumer.

8. Security. CE recognizes the concerns for security and has accordingly designed its navigation devices to be more secure than the current systems presently used by the cable systems. The present concerns of the cable industry regarding security, however, should not be used to postpone or delay the commercial availability of navigation devices to consumers. Security and prevention of theft of intellectual property has been a concern of the video cassette industry, the consumer software industry, and the DBS industry, but these concerns have not prohibited these industries from moving forward. Interestingly, none of these industries have attempted to solve their security concerns

by having the hardware portion of the system under the strict control of the service or intellectual property provider.

Any security system can undoubtedly be compromised by a determined and knowledgeable individual. Nevertheless, CE believes that the current laws addressing theft of cable services are adequate, and that given today's addressable technology, and as demonstrated by the CE designed products described herein, security of service can be maintained by the cable operator without the necessity for the cable operator to maintain physical control or ownership over any element of the customer premises equipment.

In this regard, CE strongly disagrees with the concept of separate security components under the control of the cable operator which are distinct from the remainder of the navigation device. CE does not believe that such a "split the baby" type of proposal squarely meets the intent of Congress in insuring consumer availability of navigation devices, of which the security component is an integral and essential part. Likewise, under the type of system envisioned by CE, a consumer should not have to wait on installation of security by way of card, programming, separate module, etc. by the cable provider. This would serve to defeat the intent of the legislation by turning consumers away from commercially available equipment which can only be activated at the whim and convenience of a reluctant cable operator. The old requirement that telephone systems rewire outlets to accommodate customer purchased equipment demonstrates the folly of such an approach. Rather, under the

type of system designed by CE, a consumer can obtain instantaneous connection within an addressable system by simply notifying the operator by phone of the identification number of his navigation device and thereby allowing the cable operator to electronically activate it within its cable and security system. The DBS systems are evidence that the security component does not have to be separated and provided directly by the cable operator, but can be purchased as an integral component part of the navigation device from a retail outlet with, as in the case of a cable system, subsequent electronic activation by the cable operator.

9. Signal Leakage and Quality. CE believes that the existing Part 15 certification rules adequately address the signal leakage issues concerning navigation devices. Likewise, signal quality should not be an issue in a competitive marketplace which would address such concerns to assure adequate and improved signal quality pursuant to consumer demand.

10. Industry Standards. The lengthy process involving the "decoder interface connector" in ET Docket 93-7 demonstrates the impracticability of (1) attempting to separate the security function from other customer premises equipment and (2) leaving the matter to competing industry elements to agree on some type of standard interface specifications. Rather, the navigation device should be permitted to remain as one integral component containing all elements including security, provided that there is adequate assurance through addressable technology or other means that reasonable signal security can be maintained.

11. Proprietary Technologies. CE encourages the use of the marketplace and innovative development to regulate as much of this area as possible. Claims of proprietary technologies or demands for unreasonable licensing fees, however, should not be allowed to protect existing tie in arrangements between manufacturers of navigation devices and cable service providers and to block the intent of Congress to make such devices commercially available to consumers from unaffiliated third party vendors.

12. Conclusion. In summary, CE strongly urges the Commission to move quickly to adopt reasonable rules that permit the development and marketing to consumers of integrated navigation devices which include both security and other programming functions in a fully addressable or otherwise acceptable system from the standpoint of security concerns. In this regard, the matter should also not be "put on hold", awaiting the development and introduction of digital technology. Placing the matter on hold pending such an outcome, will simply result in the stifling of the development of new technologies and products in this area. Likewise, opening up this area to competition will no doubt spur and enhance the development of digital technologies at a more rapid pace.

CE as a designer and developer of products to be used as part of the cable television industry, is committed to the growth of cable television. The commercial availability of navigation devices to consumers it believes will strengthen the cable industry, instead of allowing existing or potential customers to




be siphoned off to direct satellite broadcast or other technologies. In this regard, CE is concerned not only with providing consumers with new products and choices, but also insuring signal security to an adequate and technologically reasonable standard. If security concerns can be adequately addressed, as CE believes it has done in its own product development, then signal security should not be used as a bugaboo or general undefined fear to thwart the implementation of the congressional intent. Both the consumers and cable industry will undoubtedly benefit by the opening of this new facet of the marketplace which will spur new products and technologies in the process.

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Respectfully submitted,

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